Phone Off: 080-22961935 / 1946
E-mail: centrans@vsnl.net

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/ **Date: 16-03-2015**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements of road in low lying area of Bhadrappa layout Maruthi Nagara at 9th main and cross road and 10th cross road in ward No. 08.}

Ref.: Letter No. BUB/Testing/2014-15, dated 06-03-2015
Sample supplied to lab by : Assistant Executive Engineer
Kodigehalli Sub-Division
BBMP, Bangalore.
Name of the Contractor/ Agency*: M/s KRIDL, Bangalore.

PHYSICAL TESTS ON CEMENT

Brand* : Birla Super Grade *: 53
Type * : OPC
Date : 07-03-2015 to 14-03-2015

SL No	Name of Test	Results	Requirements as per
		Cement Sample	IS 12269-1987
1	Initial setting time	**138 min**	Shall not be less than 30 min
2	Final setting time	**234 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**1.86 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.58 mm**	Shall not be more than 10 mm
5	Compressive strength c) 3 days (average of three results) d) 7 days (average of three results)	**31.07 N/ Sq mm** **41.22 N/Sq mm**	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

*As furnished by Client.
The Results relate only to the items tested.

Verified

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Campus
BANGALORE UNIVERSITY
Bangalore-560 056.

16/3/2015

Dr. MANJESH .L
ME (Civil Engg), Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail. manjeshl@yahoo.com

Phone Off: 080-22961935 / 1946
E-mail: centrans@vsnl.net

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DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/ Date: 09-03-2015

1. TESTING OF COARSE AGGREGATES (40 mm):

Sub: Testing of Coarse Aggregates.

{Project*: Improvements of road in low lying area of Bhadrappa layout Maruthi Nagara at 9th main and cross road and 10th cross road in ward No. 08.}

Ref.: Letter No. BUB/Testing/2014-15, dated 06-03-2015

Sample supplied to lab by : Assistant Executive Engineer
Kodigehalli Sub-Division
BBMP, Bangalore.

Name of the Contractor/ Agency*: M/s KRIDL, Bangalore.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	40 mm Sample	*Single size*	*Graded*
40mm	99.00	85-100	95 – 100
20mm	57.30	0 -20	30- 70
10mm	24.60	0 -5	10- 35
4.75mm	Nil	------	0 - 5

AE-B

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	As above	14.58 %	Not to exceed 25 %
2.	Crushing value	----,,----	24.28 %	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

*As furnished by Client.

The Results relate only to the items tested.

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Campus
BANGALORE UNIVERSITY
Bangalore-560 056.

9/3/2015
Dr. MANJESH .L
ME (Civil Engg). Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail. manjeshl@yahoo.com

Phone Off: 080-22961935 / 1946
E-mail: centrans@vsnl.net

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/ **Date: 09-03-2015**

1. TESTING OF FINE AGGREGATES:

Sub: Testing of Fine Aggregates.
{Project*: Improvements of road in low lying area of Bhadrappa layout Maruthi Nagara at 9th main and cross road and 10th cross road in ward No. 08.}

Ref.: Letter No. BUB/Testing/2014-15, dated 06-03-2015
Sample supplied to lab by : Assistant Executive Engineer
Kodigehalli Sub-Division
BBMP, Bangalore.
Name of the Contractor/ Agency*: M/s KRIDL, Bangalore.

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	97.30	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	79.60	60-95	75-100	85-100	
01.18	66.10	30-70	55-90	75-100	
600. mic	47.60	15-34	35-59	60-79	
300.mic	21.90	5-20	8-30	12-40	
150.mic	3.05	0-10	0-10	0-10	

AE-8

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Silt Content	001	1.54 %	Not more than 8%
2.	Specific Gravity	----	2.61	-------

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Department of Civil Engineering
Jnana Bharathi Campus
BANGALORE UNIVERSITY
Bangalore-560 056.

9/3/2015

Dr. MANJESH .L
ME (Civil Engg). Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail. manjeshl@yahoo.com

Phone Off: 080-22961935 / 1946
E-mail: centrans@vsnl.net

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DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/ **DATE: 17-04-2015**

1. TEST REPORT ON CEMENT CONCRETE CUBES :

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Improvements of road in low lying area of Bhadrappa layout Maruthi Nagara at 9th main and cross road and 10th cross road in ward No. 08.}

Ref.: Letter No. BUB/Testing/2014-15, dated 17-04-2015
Sample supplied to lab by : Assistant Executive Engineer
Kodigehalli Sub-Division
BBMP, Bangalore.
Name of the Contractor/ Agency*: M/s KRIDL, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}

TABLE 1.1 :

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	20-03-15	17-04-15	28	22500	535	23.77	**23.55**
	002	"	"	"	"	525	23.33	
	003	"	"	"	"	530	23.55	

*As Furnished by Client.
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G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

Verified
G/F

17/04/2015
Dr. MANJESH .L
ME (Civil Engg .). Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail. manjeshl@yahoo.com

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/ Date: 09-03-2015

1. TEST REPORT ON REINFORCEMENT STEEL :

Sub: Testing of Reinforcement Steel of diameter 10mm.
{Project*: Improvements of road in low lying area of Bhadrappa layout Maruthi Nagara at 9th main and cross road and 10th cross road in ward No. 08.}

Ref.: Letter No. BUB/Testing/2014-15, dated 06-03-2015
Sample supplied to lab by : Assistant Executive Engineer
Kodigehalli Sub-Division
BBMP, Bangalore.
Name of the Contractor/ Agency*: M/s KRIDL, Bangalore.

TABLE – 1

SL No	Details	For 10 mm	
		Test Results	Req as per IS 1786-2008
01	Observed diameter of bar	**10.0 mm**	10.0 mm
02	Observed Wt/m Length **Kg/m**	**0.623**	0.567
03	Proof stress/Yield stress, fy , **N/mm²**	**555.0**	500.0
04	Bend/ Re bend Test	**Ok**	---
05	Percentage of Elongation, %	**21.90**	12.00
06	Ultimate Tensile Strength **N/mm²**	**637.0**	545.0

*As furnished by Client.
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G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY.
Bangalore-560 056.

9/3/2015
Dr. MANJESH .L
ME (Civil Engg). Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail: manjeshl@yahoo.com

Verified

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/ **DATE: 22-04-2015**

1. TEST REPORT ON CEMENT CONCRETE CUBES :

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Improvements of road in low lying area of Bhadrappa layout Maruthi Nagara at 9th main and cross road and 10th cross road in ward No. 08.}

Ref.: Letter No. BUB/Testing/2014-15, dated 20-04-2015

Sample supplied to lab by : Assistant Executive Engineer
Kodigehalli Sub-Division
BBMP, Bangalore.

Name of the Contractor/ Agency*: M/s KRIDL, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}

TABLE 1.1 :

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	23-03-15	20-04-15	28	22500	515	22.88	**23.25**
	002	"	"	"	"	530	23.55	
	003	"	"	"	"	525	23.33	

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G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY.
Bangalore-560 056.

22-04-2015
Dr. MANJESH .L
ME (Civil Engg .). Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail manjesh.l@yahoo.com

Verified

FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/

DATE: 20-04-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Improvements of Road in Low Laying area of Bhadrappa Layout, Maruthinagara at 9th Main and Cross Road and 10th Cross Road in Ward No.08}

Ref.: Letter No. Testing/BUB/2015-16, dated 18-04-2015
Sample supplied to lab by: M/s.KRIDL, Bangalore.
Report required for: Assistant Executive Engineer,
Kodigehalli Sub-Division.
BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1 :

Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	21-03-15	18-04-15	28	22500	530	23.33	**22.66**
	002	"	"	"	"	515	22.88	
	003	"	"	"	"	490	21.77	

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20/04/2016
Dr. MANJESH .L
ME (Civil Engg). Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail. manjeshl@yahoo.com

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

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BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

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DATE: 22-04-2015

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{Project*: Improvements of Road in Low Laying area of Bhadrappa Layout, Maruthinagara at 9th Main and Cross Road and 10th Cross Road in Ward No.08}

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CUBE SPECIMENS

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1	001	24-03-15	22-04-15	29	22500	525	23.33	**23.62**
	002	"	"	"	"	530	23.55	
	003	"	"	"	"	540	24.00	

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G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Campus
BANGALORE UNIVERSITY
Bangalore-560 056.

22/04/2015
Dr. MANJESH .L
ME (Civil Engg), Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e-mail: manjeshl@yahoo.com